

CLAIMS

What is claimed is:

1. A picture ratio controlling apparatus, comprising:
a video display device displaying a video; and
a system controller determining a selectable picture ratio mode based on information of a picture ratio of a source video provided to the video display device and the information of the picture ratio that is supported by the video display device and controlling the picture ratio of the source video provided to the video display device when a user requests a picture ratio selection.
2. The picture ratio controlling apparatus of claim 1, further comprising:
a remote control receiver receiving the request for the picture ratio selection.
3. The picture ratio controlling apparatus of claim 2, wherein the remote control receiver further receives a signal to select the picture ratio information that is supported by the video display device.
4. The picture ratio controlling apparatus of claim 1, wherein if a plurality of selectable picture ratio modes are determined, the system controller determines an order to select the plurality of selectable picture ratio modes, and selects one picture ratio mode when the picture ratio selection is requested to control the picture ratio of the source video.
5. The picture ratio controlling apparatus of claim 1, further comprising:
a memory classifying the information of selectable picture ratio modes, which are determined based on the picture ratio information of the source video and the picture ratio information that is supported by the video display device into $n \times m$ groups, and storing the $n \times m$ groups if the information of available picture ratios of the source video are n and the information of the picture ratios that are supportable by the video display device are m ,
wherein the system controller determines the picture ratio modes with reference to the information group of the selectable picture ratio modes read from the memory and based on the picture ratio information of the source video and the picture ratio information that is [supported] supportable by the video display device.

6. The picture ratio controlling apparatus of claim 2, wherein the remote control device selects a picture ratio selection command and the picture ratio information that are supported by the video display device.

7. The picture ratio controlling apparatus of claim 1, wherein the picture ratio information is set using a setup menu.

8. The picture ratio controlling apparatus of claim 4, further comprising:
a memory classifying the information of selectable picture ratio modes, wherein the system controller determines the plurality of picture ratio modes alone or with reference to the selectable picture ratio modes stored in the memory.

9. The picture ratio controlling apparatus of claim 6, wherein the remote control device comprises a setup button, an enter button, and direction buttons.

10. A remote control device to control a picture ratio of a video displayed on a video display device, the remote control device comprising:

a button unit comprising buttons and a picture ratio selection button to select the picture ratio of the video;

a memory storing code information corresponding to functions that are controlled using the buttons in the button unit;

a controller reading a corresponding code from the memory when the picture ratio selection button is controlled and transmitting the code to the video display device; and

a transmitter transmitting the code to the video display device.

11. A remote control device to control a picture ratio of a video displayed on a video display device in a hybrid system, wherein the hybrid system comprises a video signal providing unit providing a source video and the video display device displaying a video signal, the remote control device comprising:

a button unit comprising buttons and a picture ratio selection button to select the picture ratio of the source video output from the video signal providing unit;

a memory storing code information corresponding to functions that are controlled using the buttons in the button unit;

a controller reading a corresponding code from the memory when the picture ratio selection button is controlled and transmitting the code to the video signal providing unit; and

a transmitter transmitting the code to the video signal providing unit.

12. The remote control device of claim 11, wherein one of the buttons of the button unit selects picture ratio information supported by the video display device, and the controller provides the picture ratio information to the video signal providing unit.

13. A picture ratio controlling apparatus used in a system comprising a disc drive and a video display device, the picture ratio controlling apparatus comprising:

a digital signal processor converting a video signal picked up from a disc loaded into the disc drive into a digital signal;

a decoder decoding the digital signal output from the digital signal processor to provide the decoded video signal to the video display device; and

a system controller determining a selectable picture ratio mode based on picture ratio information of the decoded video signal and the picture ratio information that is supported by the video display device and controlling the decoder so that a picture ratio of the video signal output from the disc driver is controlled by a picture ratio mode selected when a user requests a picture ratio selection.

14. The picture ratio controlling apparatus of claim 13, wherein if a plurality of selectable picture ratio modes are determined, the system controller determines an order to select the plurality of selectable picture ratio modes, and selects one picture ratio mode when the picture ratio selection is requested to control the picture ratio of the video signal output from the disc drive.

15. The picture ratio controlling apparatus of claim 13, wherein the disc drive comprises:

a pickup unit picking up the video signal and outputting an RF signal indicative thereof, wherein the RF signal comprises management information comprising picture ration information of the disc,

a radio frequency (RF) amplifier amplifying the RF signal to a value, wherein the digital signal processor converts the amplified RF signal to the digital signal, and

a remote control receiver outputting a signal to request a selection of the picture ratio after the plurality of selectable picture ratio modes are determined, wherein the decoder decodes the video signal to output the video signal having the picture ratio mode set by the system controller.

16. The picture ratio controlling apparatus of claim 13, wherein when the picture ratio of the video signal reproduced from the disc is 16:9 and the picture ratio supported by the video display device is 4:3, the picture ratio modes are selected in an order of a letter box mode, a pan and scan mode, a screen fit mode, and a zoom fit mode.

17. The picture ratio controlling apparatus of claim 15, wherein the screen fit mode controls the picture ratio according to a line interpolation so that a picture to be displayed on the video display device stretches up and down.

18. The picture ratio controlling apparatus of claim 15, wherein the zoom fit mode adjusts right and left portions and upper and lower portions of a picture on the video display device so that the picture ratio of the picture is fit for the picture ratio supported by the video display device.

19. The picture ratio controlling apparatus of claim 13, wherein when a case where the video signal recorded on the disc has the picture ratio of 16:9 and the picture ratio set by the video display device is 16:9, the picture ratio modes are selected in an order of a wide screen mode, a screen fit mode, and a zoom fit mode.

20. The picture ratio controlling apparatus of claim 13, wherein if the video signal recorded on the disc has the picture ratio of 4:3 and the picture ratio set by the video display device is 16:9, the picture ratio modes are selected in an order of a wide screen mode, a screen fit mode, a zoom fit mode, and a vertical fit mode where black bars appear in right and left portions of a picture to be displayed on the video display device.

21. A method of controlling a ratio of a picture displayed on a video display device, the method comprising:

collecting picture ratio information of a video signal provided to the video display device and the picture ratio information that is supported by the video display device;

determining a selectable picture ratio mode based on the picture ratio information of the video signal and the picture ratio information that is supported by the video display device; and

controlling the ratio of the picture displayed on the video display device by controlling the picture ratio of the video signal to be fit for the picture ratio mode selected among the determined picture ratio modes when a user requests a picture ratio selection.

22. The method of claim 21, further comprising:

determining the selectable picture ratio mode by detecting a corresponding picture ratio mode group among a plurality of picture ratio mode groups pre-set in consideration on a number of picture ratio information of the video signal and the number of picture ratio information that is supported by the video display device.

23. The method of claim 21, wherein the picture ratio information of the video signal is collected using a result obtained by analyzing management information in the video signal, and the picture ratio information that is supported by the video display device is collected using information pre-set by the user.

24. A picture ratio controlling method used in a system comprising a disc drive and a video display device to display a video signal provided from the disc drive, the picture ratio controlling method comprising:

collecting picture ratio information of a video signal reproduced from a disc loaded into the disc drive and the picture ratio information that is supported by the video display device;

determining a selectable picture ratio mode based on the picture ratio information of the video signal reproduced from the disc and the picture ratio information that is supported by the video display device; and

controlling a ratio of a picture displayed on the video display device by controlling a picture ratio of the video signal reproduced from the disc to be fit for the picture ratio mode selected among the determined picture ratio modes when a user requests a picture ratio selection.